

RemarksSummary of Office Action

The Examiner rejected claims 1-24 under 35 U.S.C. 102(e) as being anticipated by Leggett et al. U.S. Patent No. 6,614,360 (hereinafter, “Leggett”).

Summary of Applicants’ Reply

Applicants have amended claims 3, and 20-22.

Applicants respectfully traverse the Examiner’s claim rejections based on a cited reference.

Reply to Claim Rejections  
Under 35 U.S.C. § 102(e)

The Examiner rejected claims 1-24 under 35 U.S.C. § 102(e) as being anticipated by Leggett. Claim 1 is independent and claims 2-19 and 23-24 depend either directly or indirectly from claim 1. Claims 20-22 are independent.

With respect to claim 1, the Examiner alleged that Leggett “discloses the limitation of ‘computing a frequency dependent characteristic of said at least one receiver signal’” and “further discloses the limitation of ‘using said frequency dependent characteristic to estimate a property of a formation in the region of said bottom hole assembly.’” Office action at pages 4-6, paragraphs c-d (emphases in original). The Examiner cited Leggett FIGS. 7a-d and 8, and the specification at column 13, lines 30-67 and column 14, lines 1-10.

Applicants respectfully submit that neither the cited portions of Leggett nor any other portions of Leggett disclose the use of a frequency dependent characteristic of a receiver signal and therefore do not show “computing” the characteristic, as was alleged in paragraph c, or “using” the characteristic, as was alleged in paragraph d, for estimating a property of a formation or for any other purpose. Applicants therefore respectfully submit that for at least the foregoing reasons Leggett does not anticipate claim 1 and respectfully request that the Examiner’s rejection of claim 1, and of claims 2-19 and 23-24, which depend directly or indirectly from claim 1, be withdrawn.

With respect to claims 20-22 the Examiner alleged that Leggett discloses the limitation for “[g]enerating a source signal from a bottom hole

Application No. 10/779,885

assembl[y]' in the MWD drilling system 22 of figure 8 and discloses generating a source signal traveling the ray path 190 in figure 8 and in line 43 of column 8, and further discloses the generation of signals 180 by the firing of the transmitter to generate source signals in lines 1-65 of column 13 and column 14 using BHA 22 in lines 38-43 of figure 8...." Office action at pages 10-13, paragraphs a for each of claims 20-22 (emphasis in original).

Applicants respectfully submit that neither the cited portions of Leggett nor any other portions of Leggett disclose generating a source signal from a bottom hole assembly *wherein said source signal is a noise spectrum generated by a drill bit.* Applicants have amended claims 20-22 to add this limitation. Applicants therefore respectfully submit that Leggett does not anticipate claims 20-22 as amended, and respectfully request that the Examiner's rejection of claim 20-22 be withdrawn.

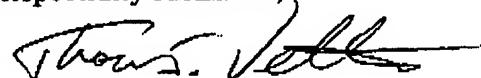
Applicants have amended claim 3 to change the dependency of claim 3 from claim 2 to claim 1. This amendment does not add new matter.

#### Conclusion

Applicants respectfully submit that the Examiner's rejections of the claims have been overcome, that claims 1-24 are patentable, and that this application is in condition for allowance.

Applicants respectfully request a prompt and favorable action.

Respectfully submitted,



---

Eric C. Woglom, Registration No. 25,445  
Gene W. Lee, Registration No. 55,369  
Thomas J. Vetter, Registration No. 30,597  
Edward M. Arons, Registration No. 44,511

Attorneys for Applicants

Fish & Neve IP Group  
Ropes & Gray LLP  
Customer No. 1473  
1251 Avenue of the Americas  
New York, New York 10020  
Phone: 212.596.9000  
Fax: 212.596.9090